Medical Center. The antenatal injection of Rh immune globulin is frequently given in the physician's office. Our recommended protocol is that blood typing and antibody screening be done early in the pregnancy. If Rh-negative, the woman returns at 28 weeks' gestation for a repeat antibody screen. The antenatal Rh immune globulin is then administered. If it was given at 16 to 18 weeks' gestation following amniocentesis for genetic analysis, then a second dose is given at 28 weeks. A record of the antenatal injection is sent to the blood bank at the hospital where the patient's infant is to be delivered. Following the delivery, if the infant is Rh-positive, a postpartum injection of Rh immune globulin is given to the mother within 72 hours of parturition.

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## Chorionic Villus Sampling

IN THE PAST DECADE, with the emergence and development of prenatal diagnosis, amniocentesis, because of its safety and reliability, has become the accepted technique for detecting genetic disorders. Despite wide acceptance, alternatives to amniocentesis have been sought because it cannot be done until the second trimester of pregnancy and requires two to four weeks for results to be available. As a result of research in several institutions around the world, a first-trimester method for obtaining fetal tissue specimens, known as chorionic villus sampling, has emerged.

A specimen is taken of the chorionic villus between 9 and 12 weeks from the last menstrual period. Using real-time sonographic guidance, a 16-gauge polyethylene catheter is placed within the chorion frondosum and a small specimen of villi (5 to 30 mg) is removed by aspiration. The villus specimen is placed in culture for cytogenetic analysis or analyzed directly for certain biochemical or DNA studies. In addition, techniques are being developed to obtain chromosome results in as few as 48 to 72 hours.

The indications for chorionic villus sampling are similar to those for amniocentesis and include advanced maternal age, the presence of a chromosomal translocation in one parent, the birth of a previous trisomic child and a family at risk for a specific biochemical or metabolic disorder.

The major complications related to the procedure are spontaneous abortion and infection. Although the risk of spontaneous abortion directly related to the procedure is unknown, preliminary information suggests it to be relatively low (1% to 3%). There also appears to be a slight but significant risk of infection related to the procedure. Included among complications are diagnostic errors, the major sources of error being maternal cell contamination of the specimen. Meticulous attention to dissecting the villi from decidual tissue and careful processing of the material are essential and should minimize this complication.

With more than 3,000 patients now having delivered following chorionic villus sampling, there is no indication of an increased risk for long-term fetal or maternal complications. More complete information on the safety and reliability of this procedure should be forthcoming from the controlled studies now ongoing under the auspices of the National Institute of Child Health and Development. Preliminary experience would suggest, however, that chorionic villus sampling has the potential to become a widely accepted alternative to amniocentesis for detecting genetic disorders prenatally.

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## Use of Lasers for the Treatment of Squamous Cell Carcinoma In Situ of the Uterine Cervix

OVER THE PAST TWO DECADES, the evaluation and management of most cases of carcinoma in situ of the uterine cervix have progressed from a hospital operating room to a physician's office or surgicenter. Diagnostic conization has been replaced by colposcopically directed punch biopsies if the colposcopy is satisfactory and the endocervical currettage elicits no abnormalities. Therapeutic conization or hysterectomy for carcinoma in situ has been replaced in most cases by cryosurgery if the lesion is small and the carbon dioxide laser for medium-sized to large lesions. The carbon dioxide laser has been used in thousands of cases and the success rate exceeds 95% in an experienced physician's hands. The laser beam is used primarily for tissue vaporization but also can be used as an excisional cone to replace the standard cold conization. The indications for laser conization are identical to those for the cold conization.

This "space age" technique is not without limitations. First, a physician must have mastered the technique of colposcopy. Next, a didactic course in laser principles and techniques with hands-on experience is mandatory. Preceptorships are highly recommended. Because of the potential for harm with inappropriate use, privileges to do the technique must be carefully monitored and granted with the same care accorded major surgical procedures. Instruments are not inexpensive, with costs ranging between $20,000 and $100,000. Consequently, most lasers are found in outpatient facilities or surgicenters. Group or referral practices may have a laser in the office, however.

When doing laser vaporization in the office, local anesthesia is used to eliminate the pain caused by heat buildup. Posttreatment pain is seldom a problem. Exercise is discouraged after therapy to lessen the chance of bleeding. Healing occurs in four to six weeks. Fertility, labor and delivery have